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L1: Entry 2 of 3

File: DWPI

Dec 9, 1992

DERWENT-ACC-NO: 1992-409000

DERWENT-WEEK: 199250

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TITLE: Self-emulsifiable fungicidal compsns. - contain copper tallate and terpenic alcohol(s) and hydrocarbon(s)

INVENTOR: DUBEARNES, R; DUFAU, G ; LAUILHE, J

PATENT-ASSIGNEE:

ASSIGNEE

CODE

DERIVES RESINIQUES &amp; TERPENIQUES

DERIN

PRIORITY-DATA: 1991FR-0006753 (June 4, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 517569 A1	December 9, 1992	F	007	A01N065/00
FR 2677222 A1	December 11, 1992		127	A01N055/02

DESIGNATED-STATES: AT CH DE ES FR IT LI PT

CITED-DOCUMENTS: CH 437909; SU 537814 ; US 4177288

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
EP 517569A1	May 27, 1992	1992EP-0401466	
FR 2677222A1	June 4, 1991	1991FR-0006753	

INT-CL (IPC): A01N 25/02; A01N 55/02; A01N 65/00; A01N 25/02; A01N 65/00; A01N 65/00

ABSTRACTED-PUB-NO: EP 517569A

BASIC-ABSTRACT:

Fungicidal compsns. comprise a copper tallate (I), a terpenic solvent (II) contg. terpenic alcohols and having a b.pt. between 150 and 220 deg.C and opt. one or more emulsifiers.

The tall oil acids from which (I) is prepd. pref. comprise 20-80% resinic acids (esp. 30-55%) the remainder being oleic, linoleic etc. acids. The solvent (II) is a mixt. of terpenic alcohols and hydrocarbons, pref. at least 50% being alcohols. The proportions of the various components in the compsn. are 40-80% (I), 15-50% (II) and 5-15% emulsifiers. The compsns. are prepd. by reacting copper oxide or hydroxide with a mixt. of resinic acids and fatty acids in a terpenic solvent at 120-160 deg.C, in the presence of a 1-6C acid as catalyst.

USE/ADVANTAGE - Treatment of plants esp. vines and cellulosic materials to prevent fungal attack. The compsns. are self-emulsifiable and show far less phytotoxicity than known copper tallate compsns.

*Not inorganic*

FILE 'CAPLUS' ENTERED AT 13:30:40 ON 06 AUG 2003  
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*Reviewed*  
*8/03.*

FILE 'WPIDS' ENTERED AT 13:30:40 ON 06 AUG 2003  
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FILE 'CABA' ENTERED AT 13:30:40 ON 06 AUG 2003  
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FILE 'CROPB' ENTERED AT 13:30:40 ON 06 AUG 2003  
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FILE 'CROPU' ENTERED AT 13:30:40 ON 06 AUG 2003  
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=> s (copper or cupric or cuprous) (35a) (suspended or suspension#)  
L1 3025 (COPPER OR CUPRIC OR CUPROUS) (35A) (SUSPENDED OR SUSPENSION#)

=> s l1 and ((copper or cupric or cuprous) (75a) (terpen? or terpene? or myrcene or  
alloocimene or dipentene or terpinolene or cymene or limonene or pinene or carene  
or cineol# or borneol or fenchol or menthanol or terpineol or geraniol or camphor  
or fenchone))  
L2 8 L1 AND ((COPPER OR CUPRIC OR CUPROUS) (75A) (TERPEN? OR TERPINE?  
OR MYRCENE OR ALLOOCIMENE OR DIPENTENE OR TERPINOLENE OR CYMENE  
OR LIMONENE OR PINENE OR CARENE OR CINEOL# OR BORNEOL OR FENCHO  
L OR MENTHANOL OR TERPINEOL OR GERANIOL OR CAMPHOR OR FENCHONE))

=> d 1-8 bib hit

L2 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:940333 CAPLUS  
DN 138:208082  
TI Effect of the aging time of an industrial copper concentrate from KGHM  
Polska Miedz S.A. on the selectivity of removal of lead minerals from it  
by flotation  
AU Drzymala, Jan; Kozlowski, Artur  
CS Inst. Gornictwa, Politech. Wroclawska, Wroclaw, 50-370, Pol.  
SO Prace Naukowe Instytutu Gornictwa Politechniki Wroclawskiej (2002), 101,  
51-57  
CODEN: PNGPAR; ISSN: 0324-9670  
PB Oficyna Wydawnicza Politechniki Wroclawskiej  
DT Journal  
LA Polish  
AB Industrial **copper** concs. contg. sulfides of Cu and other metals,  
which are stored as a 66% aq. **suspension** at 5.degree., undergo  
chem. transformations, which influence the subsequent removal of Pb-contg.  
minerals by addnl. flotation in the presence of dextrin as a depressant, K  
Et xanthate as a collector, and **terpineol** as a frother. The  
relationship of the selectivity of sepn. with the aging time is shown.  
The Fuerstenau selectivity index, defined as the recovery of Cu in the  
conc. equal to the recovery of Pb in tailings, decreases linearly with the  
aging time. The selectivity index is about 70/70 for a fresh conc. and it  
is reduced to 50/50 (lack of sepn.) after about 35 days of aging.  
IT 98-55-5, .alpha.-**Terpineol**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(frother; effect of storage time of industrial **copper** conc.  
from KGHM Polska Miedz S.A. on selectivity of removal of lead minerals  
from it by flotation using)

L2 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2000:290779 CAPLUS  
 DN 132:289949  
 TI Liquid agrochemical fungicidal and bactericidal composition.  
 IN Dufau, Ghislain; Barsacq, Michel; Molla, Gerard  
 PA Action Pin, Fr.  
 SO PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA French  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000024259	A1	20000504	WO 1999-FR2036	19990824
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	FR 2784860	A1	20000428	FR 1998-13381	19981026
	FR 2784860	B1	20001229		
	AU 9953770	A1	20000515	AU 1999-53770	19990824
	EP 1124424	A1	20010822	EP 1999-939497	19990824
	EP 1124424	B1	20030702		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	AT 243936	E	20030715	AT 1999-939497	19990824
PRAI	FR 1998-13381	A	19981026		
	WO 1999-FR2036	W	19990824		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The invention concerns a phytosanitary fungicide, bactericidal or bacteriostatic compn. comprising at least a **copper** oxide or hydroxide **suspended** in an aq. emulsion of at least a **terpene** deriv.

L2 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1995:586544 CAPLUS  
 DN 122:308751  
 TI Algicidal and herbicidal compositions comprising terpene wetting agents  
 IN Howell, Bradford S.  
 PA Applied Biochemists Inc., USA  
 SO U.S., 4 pp. Cont.-in-part of U.S. Ser. No. 959,039, abandoned.  
 CODEN: USXXAM

DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5407899	A	19950418	US 1993-32603	19930317
	AU 9351942	A1	19940922	AU 1993-51942	19931126
	AU 666095	B2	19960125		
	CA 2111314	AA	19940918	CA 1993-2111314	19931213
PRAI	US 1992-959039		19921009		
	US 1993-32603		19930317		

AB Emulsions of an aq. **suspension** of a **copper** complex and 5-50 wt.% d,l-**limonene** and an emulsifying agent are algicides and herbicides. Thus, a compn. comprised of d,l-**limonene** 42.5, tall oil fatty acid (Actinol FA-2) 8.5, triethanolamine 2.7, sodium xylene sulfonate 3.8, and chelated **copper** complex (Cutrine-Plus) 42.5 wt.% was prep'd. and was active against pond weeds and algae.

IT 102-71-6, Triethanolamine, biological studies 138-86-3, **Limonene**  
 1300-72-7, Sodium xylene sulfonate  
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (algicides and herbicides contg. chelated **copper** complex)

L2 ANSWER 4 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN  
 AN 2002-735075 [80] WPIDS  
 DNC C2002-208146  
 TI Fungicidal fertilizer compositions, useful against a range of cryptogamic disorders, especially suitable for the treatment of potatoes or grape vines, comprise copper hydroxide, amino acids, and an alkali.  
 DC C03  
 IN MADEC, A  
 PA (PENN-N) PENN AR BED SARL  
 CYC 100  
 PI FR 2823202 A1 20021011 (200280)\* 14p  
 WO 2002083599 A1 20021024 (200280) FR  
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TR TZ UG ZM ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT  
 RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM  
 ZW

ADT FR 2823202 A1 FR 2001-4907 20010410; WO 2002083599 A1 WO 2002-FR1278  
 20020409  
 PRAI FR 2001-4907 20010410  
 AB FR 2823202 A UPAB: 20021212  
 NOVELTY - Fungicidal fertilizer compositions (I), comprise 1 - 5 %  
 (calculated as copper) of a copper salt or hydroxide, together with a  
 mixture of amino acids and an alkaline reactant.  
 DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the  
 preparation of (I).  
 ACTIVITY - Plant antifungal; Fertilizer.  
 A fertilizer containing 5 % **copper** was prepared containing  
 mixed amino acids (52 %), red algae alkaline extracts (19 %),  
**copper** hydroxide (9 %), **suspension** of alkaline clay (20  
 %).  
 Vines were sprayed at 4 and 12 liters/ha, 5 treatments being given at  
 6 - 12 day intervals.  
 The percentage of leaves attacked by mildew were as follows:  
 untreated controls - 52.5 %; sprayed at 4 liters/ha - 25 % and sprayed at  
 12 liters/ha - 7.5 %.  
 MECHANISM OF ACTION - None given in the source material.  
 USE - (I) are used as plant fungicide or fertilizer, useful against a  
 range of cryptogamic disorders, especially suitable for the treatment of  
 potatoes or grape vines.  
 Dwg.0/0

TECH UPTX: 20021212  
 TECHNOLOGY FOCUS - AGRICULTURE - Preferred compositions: (I) contain (%):  
**copper** hydroxide (9), amino acid mixture (51 - 70), and alkali (30  
 - 40), amino acid mixture and alkali.  
 The amino acid mixture contains glycine, alanine, proline, lysine,  
 arginine, aspartate, glutamate, and hydroxy proline, and the alkali is  
 potassium hydroxide or carbonate.  
 The fertilizer may further contain marine algae extracts, alkaline clays,  
 surface-active and odor-reducing resins, and pine **terpene** or  
 rosin soaps.  
 TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: Preparation of (I),  
 comprises:  
 (i) treating an amino acid mixture thermally and/or by ionization  
 (gamma-radiation), and/or by treatment with an alkali and stirring until  
 its pH is 10 or more;

(ii) allowing the mixture to stand for a few minutes; and  
(iii) adding copper hydroxide and homogenizing the mixture until the blue color that forms changes to a mauve-violet color, indicating the formation of useful complexes.

L2 ANSWER 5 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

AN 2000-365012 [31] WPIDS

DNC C2000-110123

TI Plant protectant composition for controlling fungal and bacterial infections, e.g. vine mildew, comprising aqueous **suspension** containing **copper** compound and a **terpene** derivative to improve activity.

DC A97 C07

IN BARSACQ, M; DUFAU, G; MOLLA, G

PA (ACTI-N) ACTION PIN SA; (ACTI-N) ACTION PIN

CYC 89

PI WO 2000024259 A1 20000504 (200031)\* FR 25p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL  
OA PT SD SE SL SZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES  
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS  
LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT UA UG US UZ VN YU ZA ZW

FR 2784860 A1 20000428 (200031)

AU 9953770 A 20000515 (200039)

EP 1124424 A1 20010822 (200149) FR

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

EP 1124424 B1 20030702 (200345) FR

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT WO 2000024259 A1 WO 1999-FR2036 19990824; FR 2784860 A1 FR 1998-13381  
19981026; AU 9953770 A AU 1999-53770 19990824; EP 1124424 A1 EP  
1999-939497 19990824, WO 1999-FR2036 19990824; EP 1124424 B1 EP  
1999-939497 19990824, WO 1999-FR2036 19990824

FDT AU 9953770 A Based on WO 200024259; EP 1124424 A1 Based on WO 200024259;  
EP 1124424 B1 Based on WO 200024259

PRAI FR 1998-13381 19981026

TI Plant protectant composition for controlling fungal and bacterial infections, e.g. vine mildew, comprising aqueous **suspension** containing **copper** compound and a **terpene** derivative to improve activity.

AB WO 200024259 A UPAB: 20000630

NOVELTY - A plant protectant, fungicidal, bactericidal or bacteriostatic composition (A) comprises a **suspension** of at least one **copper** compound (I) in an aqueous emulsion of at least one **terpene** derivative (II). (I) is an oxide, hydroxide or mineral acid salt of **copper**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(i) the preparation of (A);

(ii) the use of (II) for improving the effect of (I) in plant protectant (specifically fungicidal, bactericidal or bacteriostatic) compositions; and

(iii) a method for treating plants using (A).

ACTIVITY - Antifungicidal; antibacterial; synergist.

MECHANISM OF ACTION - None given.

USE - For protecting plants against fungal infections (e.g. vine mildew, *Plasmopara viticola*) and bacterial infections (e.g. bacterial wilt of peach and apricot trees and *Pseudomonas bacteriosis* of apple and pear trees).

ADVANTAGE - (II) potentiates the antimicrobial activity of (I), so that (I) can be used at lower dosages to reduce harmful or phytotoxic effects in the treated plants. In tests in vines artificially infected with *Plasmopara viticola*, treatment with copper at 2050 g/ha (as the hydroxide) plus pine oil at 650 g/ha reduced the level of damaged leaves

to 22.50 %, compared with 36.25 % for treatment with 2030 g/ha of copper alone.

Dwg.0/0

TECH

UPTX: 20000630

TECHNOLOGY FOCUS - AGRICULTURE - Preferred Components: (I) is **copper** oxychloride, **copper** carbonate, **cuprous** oxide or preferably **copper** hydroxide. (II) consists of monoterpene(s), preferably **terpene** hydrocarbons (or their oxidized derivatives), alcohols, aldehydes and/or ketones, especially a mixture of **terpene** hydrocarbons and alcohols. (II) is particularly in the form of an essential oil, specifically pine oil (preferably containing 90 % **terpene** alcohols). Preferred Composition: (A) contains (I) at 200-600 g/l (specifically in the form of particles of diameter 6  $\mu$ m or less) and (II) at 50-400 (preferably 80-200) g/l. (A) further contains surfactant(s), preferably at 20-100 g/l and specifically selected from ethoxylated fatty acids or alcohols, calcium alkylbenzenesulfonate, alkyl naphthalene-sulfonates, ethoxylated alkyl (specifically dodecyl or octyl) phenols, sequenced ethylene oxide/propylene oxide or propylene oxide/ethylene oxide copolymers, mono- or di-(isopropyl, methyl or n-butyl)-naphthalene sulfonates, ethoxylated dodecylphenols, sodium dodecylbenzenesulfonate, phosphoric esters of alkyl polyethers or of ethoxylated (poly)aryl phenols (as acids and/or salts), ethoxylated castor oil, lignosulfonates, methyl dinaphthalenesulfonates, phenylsulfonates, polyalkyl naphthylmethanesulfonates, polyacrylates, ethoxylated polyaryl phenols, polycarboxylates, polyvinyl pyrrolidone (or derivatives), sulfonated cresol-formaldehyde or naphthalene sulfonic acid condensate salts, acrylic acid-acrylate ester, maleic acid-olefin or maleic anhydride-isobutene copolymer salts, ethoxylated alkyl- or polyaryl-phenol sulfates, sulfosuccinates, taurates and ethoxylated tristyril-phenols. Preparation: The claimed preparation of (A) involves micronizing (I) and the other components of the composition to give a stable, homogeneous suspension of particle size below 6  $\mu$ m. Alternatively (I) of particle size below 6  $\mu$ m is mixed with the other components.

TECHNOLOGY FOCUS - POLYMERS - Preferred Materials: Preferred surfactant additives in (A) include ethoxylated fatty acids or alcohols, ethoxylated alkyl (specifically dodecyl or octyl) phenols, sequenced ethylene oxide/propylene oxide or propylene oxide/ethylene oxide copolymers, ethoxylated dodecylphenols, phosphoric esters of alkyl polyethers or of ethoxylated (poly)aryl phenols, ethoxylated castor oil, polyacrylates, ethoxylated polyaryl phenols, polycarboxylates, polyvinyl pyrrolidone (or derivatives), sulfonated cresol-formaldehyde or naphthalene sulfonic acid condensate salts, acrylic acid-acrylate ester, maleic acid-olefin or maleic anhydride-isobutene copolymer salts, ethoxylated alkyl- or polyaryl-phenol sulfates and ethoxylated tristyril-phenols.

TT

TT: PLANT PROTECT COMPOSITION CONTROL FUNGUS BACTERIA INFECT VINE MILDEW COMPRISE AQUEOUS **SUSPENSION** CONTAIN **COPPER** COMPOUND **TERPENE** DERIVATIVE IMPROVE ACTIVE.

L2

ANSWER 6 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

AN

1994-310851 [39] WPIDS

DNC

C1994-141311

TI

Compsn. with improved herbicidal-algaecidal properties - comprises an aq. emulsion contg. a copper complex and an adjuvant surfactant.

DC

C01

IN

HOWELL, B S

PA

(BIOC-N) APPLIED BIOCHEMISTS INC

CYC

4

PI

AU 9351942	A	19940922 (199439)*	15p
CA 2111314	A	19940918 (199444)	
US 5407899	A	19950418 (199521)	3p
AU 666095	B	19960125 (199611)	
PH 30286	A	19970220 (199953)	

ADT AU 9351942 A AU 1993-51942 19931126; CA 2111314 A CA 1993-2111314  
19931213; US 5407899 A CIP of US 1992-959039 19921009, US 1993-32603  
19930317; AU 666095 B AU 1993-51942 19931126; PH 30286 A PH 1993-47340  
19931126

FDT AU 666095 B Previous Publ. AU 9351942

PRAI US 1993-32603 19930317

AB AU 9351942 A UPAB: 19941122

The following are claimed: (A) a compsn. having improved herbicidal and/or algaecidal properties consists of an aq. emulsion contg. an herbicidally and/or algaecidally effective amt. of a **copper** complex and 5-70 wt% of an adjuvant surfactant; (B) a method of controlling the growth algae and/or plants comprising bringing into contact with the algae and/or plants an aq. **suspension** of a **copper** complex, 5-50 wt% d,l-**limonene** and an emulsifying agent and (C) an environmentally acceptable carrier compsn for formulating emulsions of aq. solns. of **copper** coordination complexes comprising a mixt. of surfactants obtd. from admixt. of a) an emulsifier, b) a stabilising proportion of a non-ionic solvent for the **copper** coordination complex, and c) a surface-tension reducing proportion of a wetting agent.

Pref. the adjuvant is a **terpene**, pref. **limonene**.

The emulsion comprises 1 wt% of elemental **copper**. The **copper** complex comprises triethanolamine and monoethanolamine as chelating agents. The emulsion contains 1 wt% of emulsifying agent. The emulsifier comprises an anionic surfactant, pref. a tall oil fatty acid. The non-ionic solvent is an alkanolamine, pref. triethanolamine.

USE - The compsn. enhances delivery of copper ions to plant cells and is a rapid acting carrier formulation, partic. useful in flowing water systems.

L2 ANSWER 7 OF 8 CABA COPYRIGHT 2003 CABI on STN

AN 2002:81880 CABA

DN 20023034335

TI Stress metabolites from *Corchorus olitorius* L. leaves in response to certain stress agents

AU Abou Zeid, A. H. S.

CS Department of Pharmacognosy and Chemistry of Medicinal Plants, National Research Centre, Dokki, Cairo, Egypt.

SO Food Chemistry, (2002) Vol. 76, No. 2, pp. 187-195. many ref.  
ISSN: 0308-8146

DT Journal

LA English

AB Five coumarins were found to be produced as phytoalexins (stress metabolites) from the fresh young leaves of *Corchorus olitorius* plant, in response to inoculation with biotic stress agent, such as the spore **suspension** of the fungus *Helminthosporium turcicum* and with chemical stress agents, such as aqueous solutions of mercuric chloride and **cupric** chloride. The 5 compounds were isolated, purified and subjected to melting point and spectroscopic determinations. They were identified as scopoletin, fraxinol, isopimpinellin, xanthotoxol and peucedanol. They were tested for their antimicrobial activities. The volatile components of the natural fresh leaves and the **cupric** chloride-treated leaves were prepared and subjected to gas chromatography-mass spectrometry (GC-MS) analysis. 55 and 49 components were identified in the control and treated leaves, respectively, cis-3-Hexen-1-ol, cis-4-hexen-1-ol, **terpinolene**, sabinene and phytol were the major compounds in the control leaves, whereas those of the treated leaves were cis-4-hexen-1-ol, cis-3-hexen-1-ol, tetradecanal and phytol. The percentage of the total oxygenated compounds were increased in the **cupric** chloride-treated leaves much more than the control leaves (77.3 and 47.4%, respectively).

L2 ANSWER 8 OF 8 CROPU COPYRIGHT 2003 THOMSON DERWENT on STN

AN 2000-87768 CROPU F G

TI Plant protectant composition for controlling fungal and bacterial

infections, e.g. vine mildew, comprising aqueous **suspension** containing **copper** compound and a **terpene** derivative to improve activity.

IN Dufau G; Barsacq M; Molla G

PA Action-Pin

LO Dax, Fr.

PI WO 2000024259 A1 20000504

AI FR 1998-13381 19981026

WO 1999-FR2036 19990824

DT Patent

LA French

OS WPI: 2000-365012

FA AB; LA; CT

TI Plant protectant composition for controlling fungal and bacterial infections, e.g. vine mildew, comprising aqueous **suspension** containing **copper** compound and a **terpene** derivative to improve activity.

AB A plant protectant, fungicidal, bactericidal or bacteriostatic composition, comprising a **suspension** of at least one **copper** compound (I), e.g. an oxide, hydroxide or mineral acid salt of **copper**, in an aqueous emulsion of at least one **terpene** derivative (II), is claimed. Five formulations are presented, containing 36.76-43.55% **copper**-hydroxide, formulated with e.g. pine-oil (90% **terpenic** alcohols), arylphenoxy-peg-phosphate triethanolamine, sodium salt of a sulfonated cresol-formaldehyde condensate, ethylene-glycol, glycerol, xanthan-gum heteropolysaccharide, urea, Tensiofix-BCZ (alcohol sulfate), Tensiofix-LX (lignosulfonate), Tensiofix-D40 (cationic/non-ionic surfactant), silicone antifoamer and Baragel-24, made up with water. In antifungal bioassays, the new formulations gave better control of *Plasmopara viticola* on young vines than standard WP and SC formulations.